EURASIAN-AMERICAN PARTNERSHIP FOR

ECOLINKS

ENVIRONMENTALLY SUSTAINABLE ECONOMIES

ANNUAL REPORT

2001

Mission statement

Promoting sustainable partnerships among businesses, local governments, and associations in Central and Eastern Europe, the Former Soviet Union and the U.S. and thereby helping to solve urban and industrial environmental problems in the region.

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www.ecolinks.org

Preface

During the year 2001, many countries in Central and Eastern Europe and Eurasia made accelerated progress towards democratic and market reform, integration into European institutions, and sustainable economic development. However, environmental problems remain among the most crucial impediments to progress facing public policymakers and business decision-makers throughout this region, as management of utilities, industries, and waste treatment facilities is transferred from central control to the municipal level and the private sector. The EcoLinks Program is key to the US Agency for International Development's (USAID) strategy of improving simultaneously the region's municipal and industrial environmental conditions and its environmental management practices.

EcoLinks addresses the closely linked issues of economic development and the environment. It facilitates the establishment of business-based partnerships between environmental organizations in the region and the United States. In so doing, the program relies on shared success, and the partnerships it facilitates ideally will last long after USAID funding has ended.

Rather than focusing aid on a relatively small number of environmental projects in the region, EcoLinks provides tools and resources for a broad range of potential projects. After just three years of full operation, EcoLinks has developed many partnerships that will make important contributions to the region's environmental progress. This report reviews EcoLinks' activities for 2001 and describes these partnerships in greater detail.

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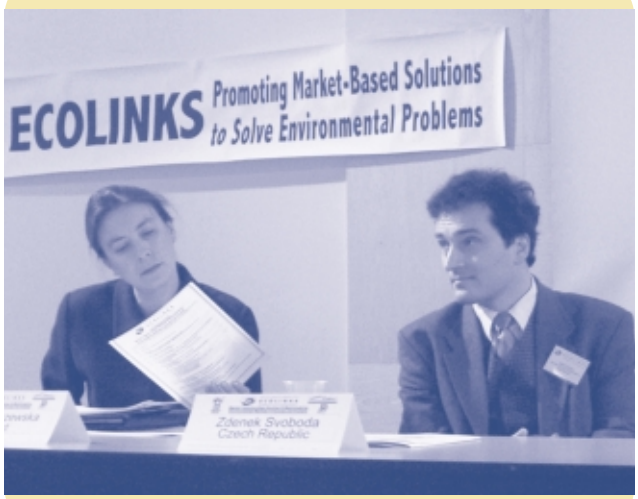
Small companies trying to work in Central and Eastern Europe and Eurasia need this [kind of] help. EcoLinks personnel were very responsive, pleasant and helpful; we are very happy with their assistance. We plan on working with EcoLinks in the future and would recommend working with EcoLinks to other companies. This is the first US governmental organization that has helped us to expand our [environmental] business into this region.
Edward Wnuk, International Environmental Systems & Supplies Corporation (IESSCO)



Introduction

The EcoLinks Program is one of several mechanisms that the US Agency for International Development created to provide assistance in addressing environmental issues in the region of Europe and Eurasia (E&E). EcoLinks addresses solutions to environmental problems throughout the region by establishing lasting partnerships among environmental businesses, governments, and associations in the region, and between these organizations and US environmental businesses. The partners undertake projects that not only solve environmental problems but also help local participants adopt the best available environmental management practices and the most appropriate technologies.

EcoLinks facilitates the development of these partnerships using two distinct but complementary program components: the Partnership Grants Program and the Trade and Investment Program. The primary responsibility of the Grants Program is to provide financial assistance for initial partner meetings and for feasibility studies; the Trade and Investment component facilitates the transfer of environmental technology. However, both components play essential roles throughout the process of establishing partnerships and supporting successful project completion.

EcoLinks' activities cover three general areas: outreach and partner matching, support for feasibility studies, and follow-on project development. Project partnerships are solidified through Trade and Investment partner matchmaking sessions and by the Grants Program Quick Response Awards, which play a crucial role in enabling potential partners to have face-to-face meetings. Once a partnership is established, the EcoLinks Grants Program provides feasibility study funding and project oversight, with an emphasis on the transfer and promotion of improved environmental management practices and high potential for partner sustainability. In many cases, projects that have been awarded EcoLinks feasibility study funds demonstrate significant potential for follow-on funding and further project development. EcoLinks supports these projects, as well as others that are not developed through an EcoLinks feasibility study, by providing guidance and contacts for additional project funding and development.

By supporting partnerships between US businesses and organizations in the E&E region, as well as intra-regional partnerships, EcoLinks leverages a large pool of talent and experience. Working closely with US businesses strengthens the capacity of individual municipalities and businesses in the region to develop and manage projects. Intra-regional partnerships, on the other hand, draw on the resources of the region so that countries in relatively early stages of transition benefit from neighbors that are more advanced. Such cross-border partnerships are increasingly relevant as many of USAID's cooperating countries move towards accession to the European Union (EU). These countries face numerous challenges regarding the need to reform fiscal,

We went overseas looking to perform the services we provide here in the States. Through truly listening to the needs and learning from our new partners we not only helped them better utilize their resources, but we also developed a very lucrative service business for us here. We could never have imagined that our international experience with EcoLinks would mean so much to our domestic business. That's the way a true partnership should work!
Steve Cavanaugh

legal, and agricultural policies, among others. But EU candidate countries also must adjust their national policies upon joining the EU in order to meet environmental quality requirements in the water, waste, and air sectors. Recent estimates of the investments necessary to meet accession requirements range from 80 to 100 billion dollars. EcoLinks helps countries identify and adopt environmental technologies and management techniques that aid them in meeting these requirements.

EcoLinks Highlights at a Glance 2001

Number of Countries Where EcoLinks Is Involved	22
Number of Countries With Grants Program Managers	8
Number of Countries With Tech Transfer Reps	7
Partnership Grants Program	
Total Number of Grants Issued in 2001	61
Total Value of Challenge Grants Issued ($000)	3,000
Number of Quick Response Awards Issued in 2001	109
Total Value of Quick Response Awards Issued ($000)	455
Total Anticipated Investment Resulting from Grants to Date ($000)	42,900
Trade and investment Program	
Number of Successful Trade Deals in 2001	47
Total Anticipated Value of Deals in 2001 ($000)[1]	42,694
Number of Successful Trade Deals to Date	55
Total Anticipated Value of Deals to Date ($000)	50,673
Total Number of Delegates Brought to the US in 2001	75

Note 1- See Table 7

The box above briefly catalogs the program's highlights during calendar year 2001. In addition to providing funding, guidance, and appropriate technologies to a diverse array of projects in the region, EcoLinks has facilitated access for US businesses to many environmental project opportunities. An important spin-off has been that several US companies are now opening offices in the E&E region as a direct result of their activities under EcoLinks. Given the marked increased in such follow-on activities during 2001, the impact of the program is expected to continue to grow. Further details on the Partnership Grants and Trade and Investment programs are provided in the following sections.

Partnership Grants

The EcoLinks Partnership Grants Program builds the capacity of businesses and municipalities in the E&E region to develop market-based solutions to urban and industrial environmental problems. The Grants Program identifies, facilitates, and supports cross-border partnerships either within the region or between the region and the United States.

These partnerships help organizations (and hence the countries) in the region by providing them with access to the most up-to-date technologies and techniques in environmental management. By learning from each other or from US experience and capabilities, organizations in the region can expedite the implementation of innovative solutions for the serious environmental issues they face.

There are two types of grants for which applicants from the United States or the region may apply. Quick Response Awards (QRA) typically provide travel funds to an organization to visit its potential partner. The maximum value of a QRA is $5,000; they may be awarded in a matter of one to two weeks. At a maximum value of $50,000, the Challenge Grant is a significant investment on the part of EcoLinks and also for the successful recipients, who are responsible for providing matching resources of 25 percent of the total project cost. The EcoLinks website (www.ecolinks.org) provides a complete discussion of the application process and requirements.

Most EcoLinks grants facilitate partnerships between organizations in the region and the United States. Working closely with a US

partner from early in the application process strengthens the capacity of municipalities and businesses to develop and manage environmental projects that respond to market incentives. Moreover, US partners often introduce innovative technologies and propose various financing options that are of great interest to their local partners. Importantly, the US partners also promote accountability and transparency in project management and provide their local partners with important insights into scoping, managing, and implementing sometimes complicated projects. In return, the US partners have a tremendous opportunity to learn about market conditions in a transition country and explore the potential for a trade and investment relationship.

Grants are also available to facilitate partnerships among countries within the region. There is tremendous potential for intra-regional exchange of experience; many organizations in the region have accumulated skills and knowledge in market finance and introducing modern technologies. EcoLinks grants are available to promote the exchange of local capacity with organizations that have had less exposure to new problem-solving approaches.

Partnerships resulting from EcoLinks grants are expected to provide benefits to both parties. Whether the partnership involves US or regional organizations, the aim is to establish a mutually beneficial relationship that will endure beyond the life of the EcoLinks grant. There are several examples of grants resulting in long-term relationships between grantees, as described below. The number of these successful long-term relationships continues to grow.

EcoLinks has Grants Program Officers based in Bulgaria, Croatia, Hungary, Kazakhstan, FYR Macedonia, Romania, Russia, Ukraine, and the United States. They provide information regarding all aspects of the Grants Program to interested organizations, assist with management and implementation of the grant proposal process, and monitor grantees' progress in both the technical and administrative aspects of the grant. Currently, the Grants Program is in the process of awarding the last round of Challenge Grants. QRAs, however, will be available through March 2003.

The year 2001 was an extremely busy one for the Grants Program. A total of 61 Challenge Grants were awarded, totaling approximately $3 million. More than 80 percent of the grants involved partners from the United States. This year also saw the largest number of grants issued since the initiation of the program. In another first, the EcoLinks Program awarded grants in Bosnia and Herzegovina beginning in 2001. Table 1 provides a breakdown of the total number of grants awarded per country.

Table 1.
Countries and Number of Challenge Grants Awarded

Bosnia & Herzegovina	2
Bulgaria	8
Croatia	5
Kazakhstan	6
FYR Macedonia	3
Romania	18
Russia Far East	6
Ukraine	13
Total	**61**

The grants awarded this past year have addressed priority problems in solid waste management, water quality, wastewater treatment, and air pollution and energy efficiency. Annex 1 provides a list of the grants awarded in 2001. Since the program began awarding Challenge Grants in 1999, a total of 165 have been awarded for $7.7 million.

One indicator of the success of the Challenge Grants aspect of EcoLinks is the level of additional funds raised by grantees to continue the

activities initiated during their projects. This financing often includes the purchase of environmental technologies or services. It is a very good indicator of the "multiplier effect" these relatively small grants can have in generating further environmental investments in new technologies. By the end of 2001, grantees had obtained more than $41 million in additional funds, representing a multiplier factor of more than 5 for every grant dollar awarded. Examples of this "multiplier effect" from this past year include:

- Electric Power Company of Macedonia signed a $20.9 million contract with a Czech environmental engineering firm to rehabilitate seven small hydro power plants.

- The Odessa regional government in Ukraine contributed $450,000 to carry out a fuel switch, from heavy oil to natural gas, at the Teplodar Heat Boiler Plant.

- Elpron Elin obtained a $100,000 loan from the United Bulgarian Bank through the USAID-Development Credit Authority guarantee program based on the energy conservation opportunities proposed in the energy audit Elpron Elin performed for its grant.

As successes like these continue, the reach and impact of EcoLinks expands.

Quick Response Awards help organizations initiate partnerships by providing the opportunity to meet with potential partners and discuss areas of possible cooperation. They are most often used to support travel for such activities as:

- Allowing one partner to visit another to assist in preparing the grant application.

- Enabling staff from a potential client to visit a technology demonstration.

- Providing for potential business partners to meet face to face.

The QRAs can be used for travel and to meet other immediate and small-scale needs of organizations exploring potential partnerships within the framework of EcoLinks. QRA activities must either facilitate partner matching for a Challenge Grant or promote environmental trade and investment in some other way. While the majority of QRAs support travel between the United States and the region (or vice versa), approximately 12 percent of the awards are used to support intra-regional travel.

During 2001, EcoLinks awarded 109 QRAs, valued at $455,000, for initiating Challenge Grant activities or in support of trade and investment activities. Table 2 shows the breakdown of awards by country.

Table 2.
Countries and Number of Quick Response Awards

Bosnia & Herzegovina	4
Bulgaria	14
Croatia	7
Czech Republic	11
Georgia	2
Hungary	7
Kazakhstan	9
Latvia	1
FYR Macedonia	3
Poland	9
Romania	20
Russia Far East	7
Slovakia	1
Turkmenistan	1
Ukraine	13
Total	**109**

As was the case with the Challenge Grants, EcoLinks was able to expand the range of countries that it serves with QRAs, adding not only Bosnia & Herzegovina but also Turkmenistan to those countries that have been awarded these grants. Since the launch of EcoLinks, a total of 304 QRAs have been awarded, totaling $1.3 million.

The "multiplier effect" is even more evident in the case of the QRAs than it is with Challenge

Grants. Since program inception, a total of $7.3 million in added investment has resulted from partnerships developed through QRAs (the equivalent of $5.62 of additional investment for every grant dollar spent). QRAs are one of the favorite tools of the Technology Representatives since their rapid (two-week) turnaround on decisions enable companies to respond very quickly to emerging opportunities. In one case, a QRA of only $5,000 led to a $5 million joint venture between two companies in Russia and the United States to manufacture and distribute timber products from wood waste. Some examples of the "multiplier effect" in the past year include:

- A $1 million agreement between Florida Heat Pump Manufacturing Company of Fort Lauderdale, Florida, and SKIF MX, Ltd. of Khabarovsk, Russia, for SKIF to purchase and distribute Florida Heat Pump's equipment for a five-year period.

- After using a QRA to perform training on geographic information systems (GIS) and their utility in environmental management systems, Environmental Systems Research Institute of Redlands, California, concluded an agreement to sell GIS system technology to the City of Kiev.

A total of 44 QRAs supporting trade and investment activities were awarded in 2001. The results of a questionnaire point out their usefulness.

Results of Using QRAs for Trade and Investment

- Twenty-six US firms formed continuing partnerships in the region.
- This included 17 distribution and joint venture agreements.
- Six firms made deals valued at almost $2.1 million.
- Of those responding to a questionnaire, 100 percent rated EcoLinks staff support as excellent or good.

To increase efficiency of the program, one of the concerns of EcoLinks is to promote the transfer of lessons learned from various activities throughout the region. Toward that end, EcoLinks has developed and maintains a library of Best Practices that are prepared from successful Challenge Grants. These reports are selected from projects that are demonstrating environmentally sound and economically efficient solutions to environmental problems in the region. They describe methodologies and technologies that have been transferred from the United States and other countries and tested under local conditions.

EcoLinks absolutely helped us to break into the Kazakhstani market. With the help of EcoLinks Technology Representative Olga Fedotova, we initiated the search for a Kazakhstani distribution representative for our company. Ms. Fedotova was very helpful in finding local candidates on short notice. We found a partner through this process and for the last two years we've been working with them with much success. So far our sales are exceeding forecasts. We look forward to working with EcoLinks again—as an organization they combine both quality and focus and are a valuable source for environmental and economic information in the region.
Paul Goltz, Market Manager for South and Central Asia, Hach Co.

During 2001, 28 Best Practice Reports were prepared and posted to the EcoLinks website. Table 3 below is a list of their titles, country of implementation, and activity area.

Table 3.
Best Practices From Challenge Grants

Title	Country	Activity
Energy and Water Conservation Program at a Textile Processing Plant in Bulgaria	Bulgaria	Energy and Water Conservation
Leak Detection and Abatement in Romania	Romania	Water Conservation
Energy Efficiency Action Plan for Buildings in Bulgaria	Bulgaria	Energy Conservation
Modernizing Boiler Houses in Slovakia	Slovakia	Energy Conservation
Training Environmental Auditors in Russia Far East	Russia	Training
Treatment of Wastewater from Abandoned Pyrite Mine in Slovakia	Slovakia	Waste Minimization
Underground Pollution by Petroleum at a Romanian Refinery	Romania	Materials Recycling
Environmental Management System for Dredging on the Bulgarian Black Sea Coast	Bulgaria	Environmental Management System (EMS) Development
Energy Audit at Romanian Petrochemical Plant	Romania	Energy Conservation
Modernization of Municipal Solid Waste Management in Bulgaria	Bulgaria	Materials Recycling
Rehabilitation of Small Hydro Power Plants in Macedonia	Macedonia	Energy Conservation
Improving Environmental Performance at a Potato Chip Plant in Kazakhstan	Kazakhstan	Energy and Water Conservation
Reducing Fly-Ash Emissions at the Vladivostok Municipal Waste-to-Energy Facility	Russia	Energy Conservation
Energy Efficient Refrigeration with Zero Ozone Depletion Potential	Bulgaria	Energy Conservation
Increasing Energy Efficiency at a Beauty Products Manufacturer in Slovakia	Slovakia	Energy Conservation
Reducing Emissions of Volatile Organic Compounds at a Paint Manufacturer in Slovakia	Slovakia	Waste Minimization
Biogas Extraction and Utilization System in Bulgaria	Bulgaria	Global Climate Change
Wind Power Production in Poland Municipality of Kisielice	Poland	Global Climate Change
Improving Water and Energy Efficiency at a Meat Processing Plant in Croatia	Croatia	Energy and Water Conservation
Environmental Management System at an Iron and Steel Works in Romania	Romania	EMS Development
Plastics Recycling in Romania	Romania	Materials Recycling

New Best Practice Reports are added to the EcoLinks website (www.ecolinks.org) as they become available.

A Challenge Grant Success Story

Cleaner Production: Reduction of Water Consumption and Wastewater Production at Gavrilovic Meat Processing Plant in Petrinja, Croatia

Conducting business in a former war zone is difficult enough. Improving a business's environmental performance in that situation can be nearly impossible. Gavrilovic Ltd. deserves international recognition for striving to do more than return its meat processing plant in war-torn Petrinja, Croatia, to full capacity. Gavrilovic, working with Universal Aqua Technologies, Inc., of Torrance, California, and two local partners, used an EcoLinks Challenge Grant to reduce water consumption and pollution.

With its wastewater treatment facility destroyed during the recent war, Gavrilovic's meat processing plant currently operates at only 30 percent of capacity. Still, the plant uses approximately 2,000 cubic meters of water a day for product sterilization, steam generation, cleaning, and cooling — thus, water accounts for up to 53 percent of total production costs. The plant does not use demineralized water, which results in significant scaling in pipes and installations, reduces operating efficiency, and increases costs unnecessarily. And because the water treatment plant is nonfunctional, water polluted with various suspended solids and fat is discharged into the Kupa River.

The full-scale water management program developed by Gavrilovic and Universal Aqua Technologies promises to immediately reduce annual water consumption by 30 percent, from 6 million to 4.5 million cubic meters. Total wastewater load is reduced by 23 percent. A pilot reverse-osmosis, water-recycling unit demonstrated a potential yearly reduction of 56 tons of suspended solids and 20 tons of fat in water effluent.

In terms of economic benefits, the company expects to save $251,500 a year on water by improving water-use practices, installing a full-scale water recycling facility, and collecting and processing rainwater. Savings on maintenance and energy will cut annual operating costs by 20 percent, or $130,000. By increasing water use efficiency, the volume of water to be treated before discharge into the river is reduced from 1,500 to 1,000 cubic meters per day, saving $150,000 a year in treatment costs. In addition, a study on the feasibility of co-generating heat and electricity showed that Gavrilovic could save $250,000 to $400,000 per year, paying back the required capital investment in less than six years.

Trade and Investment Program

The mission of the EcoLinks Trade and Investment Program is to enhance the flow of environmental trade and investment by fostering partnerships between US environmental goods and service providers and businesses and municipalities in the Europe and Eurasia region. During calendar year 2001, EcoLinks facilitated 47 transactions, 39 of which resulted in $42.7 million in contracts and pending awards for US companies. This represents a five-fold increase in the number of transactions completed versus 2000. These successes were accomplished, in part, through support to 221 US companies that visited the EcoLinks countries and assistance to 75 delegates from the region who visited the United States for trade shows, site visits, or other partnering activities.

These highlights reflect the transfer of US environmental technologies and management techniques in the areas of energy efficiency, municipal and industrial wastewater treatment, pollution control, solid waste management, and remediation of hazardous waste. Given a total EcoLinks operating budget of about $1 million, these transfers represent an effective leveraging of external funds of over 40 to 1.

As a development tool, EcoLinks Trade and Investment assists organizations in the E&E region in locating appropriate and cost-effective technologies to address their environmental problems and in forming partnerships with US firms through which improved environmental management practices are fostered. The overarching result of these activities is that many national, provincial, and local governments, as well as private and state-held companies, have improved the environmental services they offer. Furthermore, through EcoLinks they are able to more rapidly address environmental issues that would otherwise go unmanaged for far longer periods of time. This section elaborates on the mechanisms through which EcoLinks realizes these successes and provides some representative examples from calendar year 2001.

The key asset of the Trade and Investment Program is the presence of EcoLinks Technology Representatives, or Tech Reps, in selected US Commercial Service offices in the region. The Tech Reps work one-on-one with US and region organizations to foster the crucial relationships necessary for partners to do business together. They bring to the program an in-depth understanding of local environmental needs, regulations, and business activities, and they are knowledgeable about the types of US technologies that are available and appropriate. In addition to providing the full suite of Department of Commerce services to US firms, including Gold Key, trade missions, international market insights (IMIs), and industry sector assessments (ISAs), they assist US and region partners with EcoLinks Quick Response Awards and Challenge Grants and with post-grant, follow-on project activities.

The EcoLinks Tech Reps are supported in Washington by a small but focused staff that serves to facilitate the linkage between environmental problem holders in the region and solution providers in the United States.

Together, the Tech Reps and EcoLinks staff provide US businesses and region partners with a variety of services and resources in the following areas:

- Market analysis and reporting.
- Identification and dissemination of environmental business opportunities.
- Outreach in the region.
- Outreach in the United States.
- Facilitation of environmental business partnerships.

The sections below provide a snapshot of some of the specific activities offered in the past year and discuss how they helped to contribute to the overall success of EcoLinks' Trade and Investment Program.

Market analysis and reporting – As employees of the US Department of Commerce, EcoLinks Tech Reps routinely prepare and submit analyses of market opportunities for environmental technologies in the form of international market insights and international strategic assessments. The IMIs provide readers with topical and sometimes time-sensitive information about market conditions in particular segments of local industries. They run the gamut from tender announcements to discussions of changes in regulations affecting a particular market. The ISAs, as their name suggests, offer strategic and succinct international market information on specific industries that can help determine market potential, market size, and likely competitors. Both types of reports can be very helpful either for tracking a specific opportunity or for identifying opportunities available in a particular country. These reports are available to registered US companies for countries worldwide at www.ita.doc.gov, and for countries specific to the EcoLinks program at www.ecolinks.org.

In 2001, the EcoLinks Tech Reps submitted a total of 92 IMIs and ISAs. Table 4 provides a breakdown of the numbers and types of reports prepared.

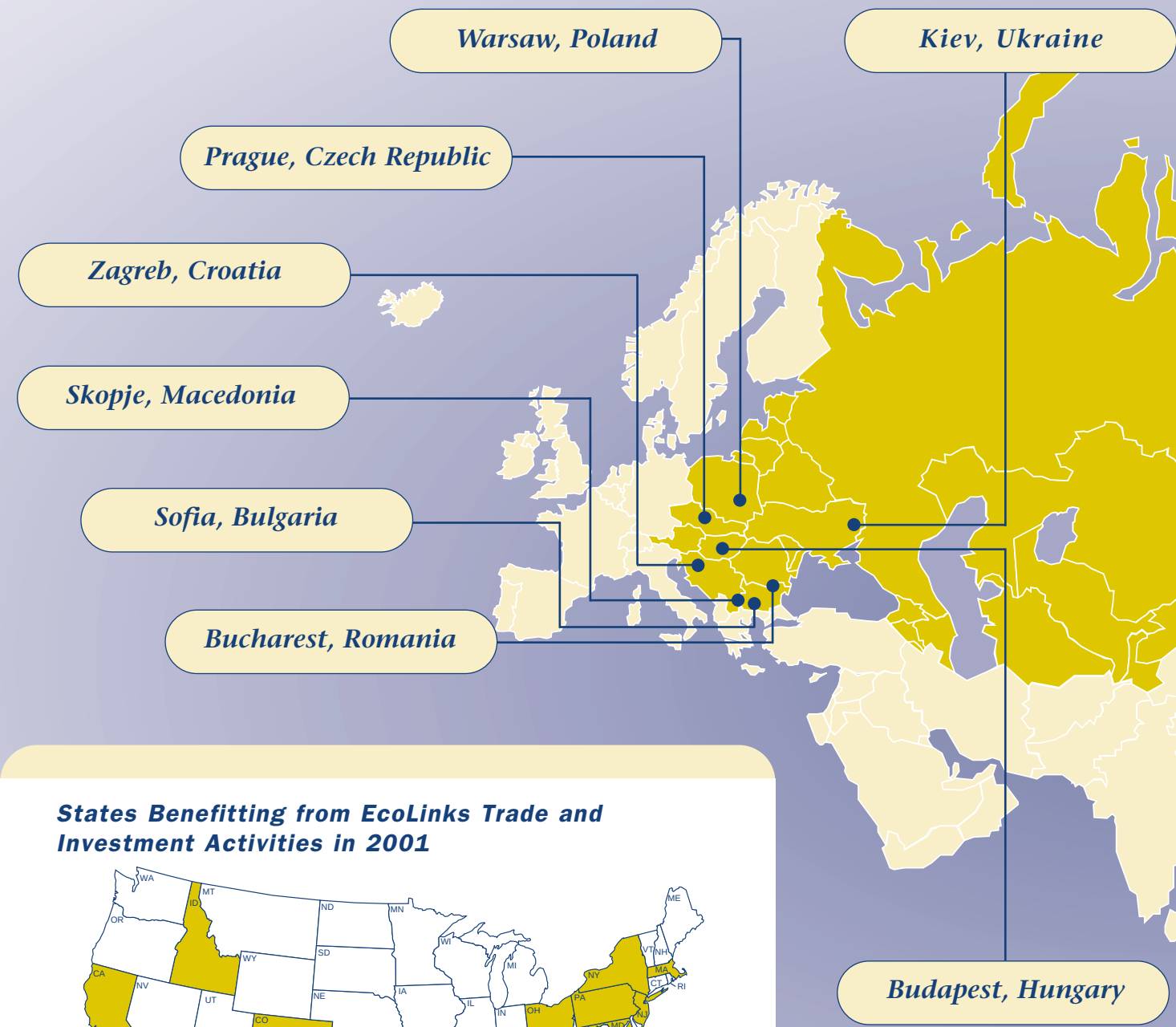
Table 4.
Numbers and Types of Reports Submitted by EcoLinks Tech Reps, 2001

Country	Number of IMIs	Number of ISAs	Total
Bulgaria	2	1	3
Croatia	3	1	4
Czech Republic	39	3	42
Hungary	1	0	1
Kazakhstan	11	1	12
Poland	17	3	20
Romania	10	0	10
Total	**83**	**9**	**92**

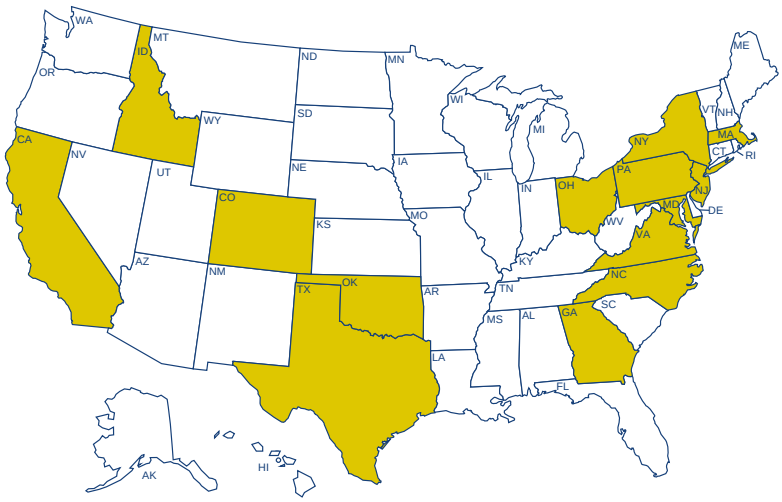
Identification and dissemination of business opportunities – The Tech Reps relay specific market opportunities, or trade leads, to US companies through a number of mechanisms in the EcoLinks program. These include a USAID-funded system for electronic trade lead matching called the US Global Technology Network (GTN), an expanding database of EcoLinks contacts that includes the Environmental Technology Team of the International Trade Administration (ITA), and, more recently, the EcoLinks website, which advertises opportunities and matches partners.

The Tech Reps work closely with the GTN in order to broadcast business opportunities to interested firms in the United States. GTN recently has introduced a new database and website, www.usgtn.net, which allows for the improved tracking of technology transfer opportunities. Currently the database, which has recently been adding 100 clients per week, includes more than 1,000 US firms representing various sectors of the environmental and renewable/clean energy business community, such as pollution control and prevention, environmental management, treatment and disposal of solid and hazardous waste, and renewable and clean technologies. In 2001, the Tech Reps submitted 124 leads through the GTN system. The leads resulted in more than 150 documented letters of interest from US firms, yielding 10 partnerships between US and local firms.

EcoLinks Partnership Program

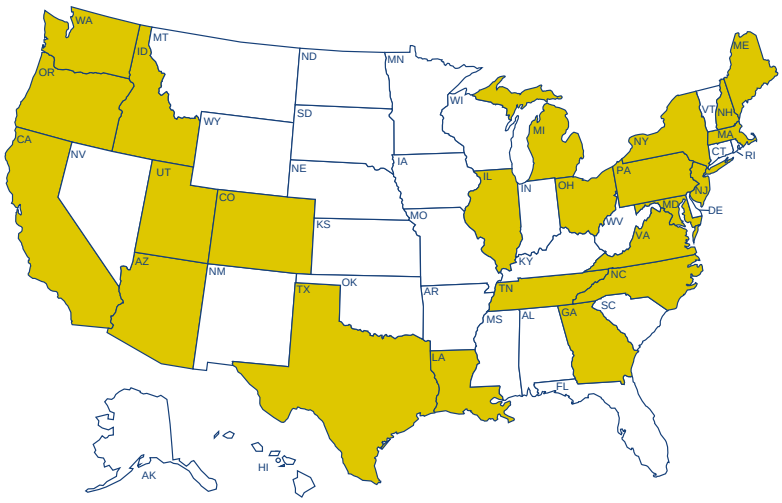


States Benefitting from EcoLinks Trade and Investment Activities in 2001



Office Network

States Benefitting from EcoLinks Grants in 2001



For more information: www.ecolinks.org

Table 5.
US Firms Supported in EcoLinks Countries, 2001

Country	Number of US Firms Supported in Country
Bulgaria	40
Croatia	7
Czech Republic	56
Hungary	45
Kazakhstan	10
Poland	28
Romania	35
Total	**221**

Trade opportunities that are not appropriate for the GTN trade lead system are disseminated through the database of EcoLinks contacts. For example, trade leads are passed to all members of the ITA Environmental Team, who in turn identify and contact candidate providers of US environmental goods and/or services. US environmental businesses and trade associations are made aware of new opportunities as they arise, and EcoLinks Tech Reps and staff follow up with prospective partners by arranging meetings, advising them on markets in the countries, and searching for additional sources of financing for environmental projects. In 2001 the Tech Reps assisted more than 200 US companies visiting EcoLinks countries (see Table 5).

Outreach in the region – The EcoLinks Tech Reps carry out extensive outreach activities with local business and municipal leaders to identify their environmental needs and partnering interests and to inform them of US technologies and experience relevant to their needs. These activities include public seminars providing an opportunity for US companies to present their capabilities and technologies. The Tech Reps also participate in major environmental technology trade shows throughout Europe. The list in the next column shows what they attended in 2001.

Local & Regional Environmental Trade Shows Attended by EcoLinks Tech Reps

- Pollutec (Europe's largest environmental trade show) (France)
- Water 2001 (Kazakhstan)
- Waste Expo-Kazakhstan
- EnviBrno (Czech Republic)
- Tau Expo (Italy)
- Zagreb Environmental Trade Show (Croatia)
- 3rd Black Sea International Conference for the Water Sector (Bulgaria)
- Stroiko (Building Materials) 2001 (Bulgaria)
- Intereko (Poland)
- Poleko (Poland)
- OkoTech (Hungary)

Tech Rep attendance at these regional and local trade shows serves several purposes for EcoLinks. First, the shows are an excellent venue for marketing the EcoLinks Program, because the audience consists primarily of local firms and organizations that are generally eager to participate. Second, the shows offer a pool of potential partners for US firms, and the Tech Reps can evaluate them in person. Finally, the shows are ideal opportunities for any visiting US firms to introduce themselves to local participants.

In a first for the Program, EcoLinks will be attending the 13th International Trade Fair for Water, Sewage, Refuse Recycling (IFAT) in Munich, Germany, in May 2002. IFAT is held every three years and is billed as one of the largest environmental shows in the world. Approximately 6 percent of the 100,000-plus visitors at the last show (held in 1999) were from US firms, so the 2002 show is expected to provide fertile ground for EcoLinks. Most of the EcoLinks Tech Reps and several US-based EcoLinks personnel will attend, staffing a booth to provide an overview of the EcoLinks program and trade opportunities in the region. EcoLinks expects a mix of firms from both the United States and the region to attend.

Outreach in the United States – EcoLinks is pursuing a vigorous outreach strategy to inform US environmental companies and

associations of opportunities in the E&E region. In 2001, the Tech Reps attended several US shows, many of them bringing delegations from countries in the region.

US Trade Shows Attended by EcoLinks Tech Reps and their Delegations

- American Waterworks Association (AWWA) Trade Show
- EnviroTech
- Lab Expo
- Waste Expo
- WEFTECH

US trade shows offer Tech Reps another opportunity to advertise the program and, more importantly, to introduce their delegates to US environmental technologies on display. In many cases, delegates have initiated discussions at these shows that have resulted in business deals. Meetings on the floors of these trade shows may result in visits by the US firms back to the E&E region. In 2001, the Tech Reps brought a total of 75 delegates to trade shows or other activities in the United States. Table 6 summarizes Tech Rep and delegate attendance at US shows in 2001.

In addition to these shows, several Tech Reps also attended events organized by US-based EcoLinks staff. These included an EcoLinks strategy session in Arlington, Virginia, in April 2001 that involved more than 50 U.S. stakeholders from the environmental sector, and a reception on Capitol Hill with over 150 attendees, including congressional staff, embassy representatives, US government representatives, and EcoLinks staff. In December 2001, the Tech Reps from Romania and Bulgaria brought more than 15 delegates to Washington to brief more than 30 US business representatives about opportunities within their respective countries. After the morning briefing, the US representatives were able to have one-on-one meetings with delegates. Several more of these market opportunities and matchmaking seminars are planned for the coming year; they have proven to be a very effective means of establishing long-term trade partnerships.

Table 6.
Tech Rep/Delegate US Trade Show Attendance By Country, 2001

Country	Number of Delegates	Shows Attended
Bulgaria	25	Waste Expo, WEFTECH
Croatia	-	-
Czech Republic	-	Waste Expo
Hungary	10	Waste Expo, WEFTECH
Kazakhstan	6	Waste Expo, EnviroTech, Lab Expo
Poland	1	WEFTECH
Romania	33	WEFTECH
Total	**75**	

For the coming year, EcoLinks is taking steps to formalize its participation at several US trade shows, to include EcoLinks Program overviews, Tech Rep presentations on trade opportunities in their countries, and extensive partner matchmaking. In this regard, EcoLinks staff has identified the Air & Waste Management Association Trade Show (in June 2002 in Baltimore) and the Water Environment Federation's WEFTECH show (in September 2002 in Chicago) as the two most relevant and complementary shows for EcoLinks. The US-based EcoLinks staff supports the Tech Reps in their efforts to recruit and bring delegations to both shows. An important element of this support is the use of the EcoLinks website, which serves as a bulletin board for attendee lists and associated information. A proven strategy within the EcoLinks Program is

Gold Key Service

The Foreign and Commercial Service's Gold Key Service provides US firms with prequalified and prescreened appointments with potential overseas agents, distributors, sales representatives, and strategic business partners. The cost of the Gold Key Service varies by country. Clients using Gold Key Service will receive:

- Appointments with prescreened and prequalified sales representatives and partners.
- Background and contact information on each potential partner, such as the size of the company, the number of years the company has been in business, its product or service lines, and after-sales services.
- Customized market and industry briefing with U.S. Commercial staff in advance of business meetings.
- Market research on the relevant industry sector.
- Assistance with travel, accommodations, interpreter service, and clerical support.
- A post-meeting debriefing with US Commercial Service staff to discuss results of meetings, and assistance in developing appropriate follow-up strategies.

Each Commercial Section typically requires six weeks to set up an effective Gold Key Service agenda. The EcoLinks Tech Reps have extensive experience with performing Gold Key Service and are very pleased to provide it to interested US firms.

to utilize the web as a source of such background information prior to partnering activities, thereby increasing the chances that one-on-one meetings between US and region organizations lead to sustainable partnerships. Using this strategy, EcoLinks anticipates recruiting and supporting at each show upwards of 50 delegates from the Tech Reps' countries.

All of these activities serve to raise the profile of EcoLinks and will help to market it to a wider audience within the United States and throughout the E&E region. As EcoLinks becomes better known, more partnerships will ultimately result from its services. Of course, given that many successful EcoLinks partnerships have taken up to two years or more to cultivate, the increased success of the program during the past year must be attributed in part to this expanded market visibility, but also to the prolonged efforts and dedication of the EcoLinks Tech Reps.

Facilitation of environmental business partnerships – The primary measure of success of the EcoLinks Trade and Investment activities is the number of trade deals facilitated by the Tech Reps. In 2001, they facilitated 47 trade successes, which amounts to a five-fold increase over the previous year. Table 7 summarizes these EcoLinks successes and lists the program activities that reportedly contributed to their completion. Of course, other program activities may have contributed to a particular success, including market analysis, initial partner contact at an outreach seminar, or the countless e-mails and phone calls to which the Tech Reps routinely respond.

Table 7 presents the total number of deals in the second column, including contracts where the monetary value is yet to be determined (e.g., from a distribution agreement), and the total number of deals that have been given a monetary value in the third column. These values are determined by the Commercial Service and have been approved by the Department of Commerce.

The column indicating type of assistance activities reflects the broad range of tools and activities that contributed to these successes. These include the Department of Commerce Gold Key Service, counseling sessions, and EcoLinks Grants. Of 47 deals, 22 involved EcoLinks Quick Response Awards and 9 involved EcoLinks Challenge Grants. This reflects the complementary nature of the two EcoLinks Program components; the Grants Program assists the Tech Reps in forming trade partners, and the Tech Reps in turn are able to facilitate follow-on financing of projects developed in the Grants Program.

Table 7.
Trade Activity, 2001

Country	Total Number of Transactions[1]	Total Value/ Number of Deals[2]	Types of Assistance Activities Provided[3]
Bulgaria	4	$6,300,000 / 2	Quick Response Award (QRA)—1 Counseling Session (CS)—4 Challenge Grant (CG)—3
Croatia	0	0	CS—7
Czech Republic	15	$454,600 / 14	QRA—13 Gold Key Service (GKS)—4 Partner Matching—3
Hungary	4	$1,193,000 / 4	CG—1 CS—4
Kazakhstan	5	$260,978 / 5	QRA—1 GKS—1 CS—3 Global Technology Network (GTN)—2
Poland	11	$26,265,000 / 6	QRA—5 GKS—2
Romania	8	$8,221,000 / 8	QRA—2 CS—8 CG—5 GTN—2
Totals	**47**	**$42,694,578 / 39**	**QRA—22 GKS—7 CS—26 CG—9 GTN—4 Partner Matching—3 Total Assistance Activities—71**

Notes:

1. This number includes transactions that resulted in contracts with a monetary value or agreements to establish distributorships or some other kind of business relationship.

2. The deals reported here are those between US and local partners that have been assigned a monetary value for contracts that have been awarded and for those in the process of finalization.

3. These are the major types of formal assistance provided directly to US firms. Tech Reps also routinely provide informal assistance and spend a substantial amount of their time marketing the program or recruiting delegates to travel to the United States for trade shows or other partnering events.

These EcoLinks trade successes have proven to be complementary to other US government and foreign assistance programs. For many of these deals, funding has come from such sources as the World Bank, the ISPA fund for pre-EU accession countries, the Polish Ecofund, and the US Trade Development Agency (TDA). Results from EcoLinks Challenge Grants have in several cases been ideal pre-feasibility studies for follow-on study financing from the TDA. During 2001, five EcoLinks projects in Hungary, Poland, and Romania led to more than $1.6 million in TDA funding.

Another measure of success for the EcoLinks Program is the establishment of long-term relationships between US firms and the countries in which they work. In 2001, two US companies initiated or completed formal business relationships with Romanian partners. Cavanaugh & Associates (see box) has begun work on establishing a joint venture in Bucharest, and Waste Minimization Technology has signed a licensing agreement with REMI Company. Other firms in all of the other EcoLinks countries have signed licensing or distributorship agreements and, in the Czech Republic, the US firm The IT Group established a local company in 2001. As a direct result of such commitments on the part of EcoLinks participants, substantive improvements in environmental services and practices in the region are likely to continue well into the future.

EcoLinks Partnership Creates Multiple Benefits for US Engineering Firm

Steve Cavanaugh, president of Cavanaugh & Associates, a small engineering firm in North Carolina, couldn't have foreseen how much his firm would gain from pursuing international business with the help of EcoLinks. What started as a modest idea developed, through persistence and commitment, multiple new business opportunities in the United States and Europe for Cavanaugh along with a National Recognition Award from the American Council of Engineering Companies (ACEC).

In 1996, five independent businesses met at the US Chamber of Commerce to discuss ideas for entering overseas markets. TecUSA, LLC was born of this meeting and the participants set about building on their connections in Central and Eastern Europe. Cavanaugh traveled to the Czech Republic and Romania and found himself in Iasi County, northeastern Romania, in November 1997. RAJAC-Iasi Water Authority, the second largest Romanian water utility, needed new technology to fix its leaking water distribution system. As much as 30 percent of its water flow was being lost each day from leaks. Cavanaugh's firm, with expertise in leak detection, agricultural planning, and construction management, realized that with some additional funding, it could find and transfer the technology from the United States to RAJAC-Iasi.

Cavanaugh began searching in the United States for assistance, talking to anyone who could give him information on funding for technology transfer. Determination and persistence eventually brought Cavanaugh to EcoLinks, and his firm submitted a "travel grant" proposal. EcoLinks awarded the firm a $5,000 Quick Response Award to defray the cost of travel to Romania to assess the specific needs of RAJAC-Iasi. Upon return to the United States, Cavanaugh applied for an EcoLinks Challenge Grant, which was approved on the first round of review in August 1999. The $50,000 grant enabled Cavanaugh to buy the leak detection equipment from a distributor in Ohio and install it at RAJAC-Iasi's facility.

The new technology allowed RAJAC-Iasi to pinpoint its leaks and fix them, saving 60,000 m_ of water and $24,000 per year in revenue. Word of the success of this pilot project spread around the region and Cavanaugh & Associates is now about to complete its second EcoLinks Challenge Grant, transferring the same technology to other water utilities in the area. As Steve Cavanaugh put it, "We found the technology and the client and EcoLinks set the guidelines and provided all the answers to the questions." Cavanaugh's business opportunities overseas have expanded greatly due to its EcoLinks projects, and Iasi County itself is preparing to fix leaks throughout the area with the same technology in a program that is estimated to save 8 million m_ of water and $3 million annually. In addition, Cavanaugh has used this success to open up a new business area focused on providing similar services to US municipalities. Cavanaugh & Associates has recently been awarded the American Council of Engineering Companies (ACEC) National Recognition Award, which has been hailed as the "Academy Awards" of the Engineering Industry.

Conclusion

EcoLinks is still a relatively new program, yet its first four years of activity produced many partnerships that have contributed to improving the state of the environment in the E&E region. As the examples in this report demonstrate, the problems addressed by these partnerships are diverse, but their projects share some important outcomes:

- The transfer of US environmental technologies and techniques to organizations in the region.
- Better environmental quality for the people living near the sites where the technologies and techniques are employed.
- Better institutional capability to manage environmental issues in the region.

Through EcoLinks and other programs, USAID is committed to working with transition economies to increase the flow of trade in technologies that contribute to increased environmental protection. This commitment reflects a broader, international consensus regarding the relationship between trade and the environment. At the most recent meeting of the World Trade Organization (WTO) in Doha, Qatar, November 2001, country representatives identified the free trade of environmental goods and services as a priority, especially for developing and transition economies. This also implies significant future opportunities for US environmental businesses.

The increase in EcoLinks successes during 2001 suggests that significant opportunities still exist for these businesses in the E&E region. In the year ahead, EcoLinks plans to improve mechanisms for outreach to US companies and to support the development of lasting financing strategies that encourage further environmental investment. The coming year is expected to bring continued EcoLinks success.

EcoLinks Partner Organizations

US Agency for International Development (USAID)

The US Agency for International Development (USAID) is an independent federal government agency providing technical assistance and humanitarian aid to foreign countries to support the political and advance the economic interests of the United States. In addition to being viewed as a premier development agency, USAID has six principal goals crucial both to achieving sustainable development and to advancing US foreign policy objectives:

- Broad-based economic growth and agricultural development.
- Democracy and good governance.
- Human capacity development education and training.
- Improved health and population growth slowed.
- Environmental protection (including energy).
- Disaster relief.

With headquarters in Washington, D.C., USAID's strength is its field offices (Missions) around the world. USAID works in close partnership with private voluntary organizations, indigenous organizations, universities, American businesses, international agencies, other governments, and other US government agencies. USAID has working relationships with more than 3,500 American companies and more than 300 US-based private voluntary organizations.

US Department of Commerce

The US Department of Commerce Commercial Service's worldwide network includes offices in more than 100 US cities and at more than 80 overseas posts. This presence brings professional trade assistance to US firms both at home and in more than 95 percent of the world market for US exports.

The Commercial Service provides a full array of trade assistance, including:

- Trade counseling,
- Trade contact services,
- Product and service promotion,
- Essential market research,
- Customized market research,
- Trade leads,
- Advocacy on behalf of US business interests,
- Trade finance information and support,
- Promotion and management of trade shows,
- Organization of international trade missions,
- Credit checks on potential overseas business partners, and
- Certification of established trade events.

Institute of International Education

The Institute of International Education (IIE) is dedicated to the international exchange of people and ideas. Its signature line, Opening Minds to the World, is emblematic of its commitment to build the capacity of future leaders to think and work on a global and intercultural basis. Founded in 1919 as an independent, nonprofit organization, IIE administers more than 200 international exchange programs, including the Fulbright Scholars Program, the Humphrey Fellowship Program, and the Lucent Global Science Scholars Program.

Regional Environmental Center

The Regional Environmental Center for Central and Eastern Europe (REC) is a nonpartisan, non-advocacy, not-for-profit organization with a mission to assist in solving environmental problems in Central and Eastern Europe. The Center fulfills this mission by encouraging cooperation among nongovernmental organizations, governments, businesses, and other environmental stakeholders; by supporting the free exchange of information; and by promoting public participation in environmental decision-making. The REC was established in 1990 by the United States, the European Commission, and Hungary. Today, the REC is legally based on a Charter signed by the governments of 25 countries and the European Commission, and on an International

Agreement with the Government of Hungary. The REC has its headquarters in Szentendre, Hungary, and local offices in each of its 15 beneficiary countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, FYR Macedonia, Poland, Romania, Slovakia, Slovenia, and Yugoslavia.

Global Technology Network

The Global Technology Network (GTN) is a USAID program in the Economic Growth and Agriculture Development Office of the Global Bureau. It is aimed at matching the technological needs of companies in developing countries with solutions from small- and medium-size US companies. GTN facilitates the transfer of technology and services from the United States to countries worldwide through the dissemination of trade leads via e-mail. US companies may register with GTN to receive trade leads at no cost. Business opportunities are identified by a network of participating in-country public- and private-sector representatives. These requests are transmitted from the field and electronically matched with US firms registered in GTN's sector databases. Specific trade lead information is then forwarded, via e-mail or facsimile, to appropriate US companies. GTN covers more than 700 different environment and renewable energy sub-sectors, including pollution control, treatment and disposal, and clean technologies.

Environmental Export Council

The Environmental Export Council (EEC) is a national nonprofit business alliance dedicated to promoting the transfer of environmental technology, expertise, and information worldwide and advancing private-sector investment in environmentally sustainable development. Founded in 1992 and based in Washington, D.C., EEC is composed of environmental companies, industry associations, and organizations that are active internationally. To help expand environmental business overseas, EEC works directly with member companies to develop export promotion initiatives and public–private partnerships. EEC works directly with US and overseas companies, organizations, and governments to develop private- and public-sector initiatives to create demand for U.S. environmental products and services.

Global Environmental & Technology Foundation

The Global Environmental & Technology Foundation (GETF) is a 501(c)(3) not-for-profit corporation that promotes the development and use of innovative technology to achieve sustainable development. For nearly a decade, GETF has brought industry, government, and communities together to address environmental challenges with innovative solutions. The US Clean Technology Exchange is a dynamic Internet-based tool to facilitate the exchange of information on innovative environmental technologies and practices and to stimulate environmental technology partnerships among E&E countries and the United States. The Exchange, accessible through EcoLinks' website, provides a platform for US and E&E region technology providers, businesses, and municipalities with environmental challenges, and the international financial community, to come together to explore new alliances to meet the environmental needs of the region. The Exchange can help users to find partners, locate financing opportunities, and access resources to support successful partnerships.

DevTech Systems, Inc.

DevTech Systems, Inc. is an economic consulting firm specializing in development. Its mission is to help improve the lives of those living in less developed countries by assisting in the development of economic, social, cultural, and environmental policies and institutions that can foster rapid and equitable economic growth. It implements the Environmental Information Systems and Networking (EISN) project for USAID. DevTech provides assistance to EcoLinks through EISN in the areas of program management, information systems, and support of Tech Rep activities.

Awarded Challenge Grants

EcoLinks Partnership Grants Program
Awarded Challenge Grants
Fourth and Fifth Cycles

Fourth Cycle

BULGARIA

A Techno-Economic Model for a Geothermal Plant in Sapareva Banja
Leader: Municipality of Sapareva Banja, Bulgaria
Partner: Princeton Energy Resources International, LLC, Rockville, MD,USA
Partner: Elisa Consult, Sofia, Bulgaria

Cleaner Shoe Production: Environmental Friendly Products
Leader: Valeo Company, Plovdiv, Bulgaria
Partner: BEM Systems, Inc., Chatham, NJ, USA

Action Plan for Integrated Water Quality Management
Leader: Municipality of Kavarna, Bulgaria
Partner: Pennsylvania-American Water Company, McMurray, PA, USA
Partner: Stoarch, Sofia, Bulgaria

Energy Audit
Leader: Kitka 1 Joint Stock Company, Novi Pazar, Bulgaria
Partner: EETEK Kft, Budapest, Hungary

Treatment System for Recyclable Waste at a Landfill
Leader: Chistota Iskar Ltd., Sofia, Bulgaria
Partner: EBA Wastechnologies, Santa Rosa, California, USA

Recycling Fluorescent and High Intensive Discharge Lamps
Leader: Svetlina, Sofia, Bulgaria
Partner: Lamp Recyclers of Louisiana, Inc., Hammond, Louisiana, USA

CROATIA

Cogeneration Plant in Clinical Hospital Osijek
Leader: Klinicka Bolnica Osijek (KBO), Croatia
Partner: Parsons Energy & Chemicals Group, Reading, PA, USA

Waste Management Planning
Leader: Municipality of Biskupija, Croatia
Partner: Environmental Technology Group, Inc., Centerport, NY, USA
Partner: Urbing, Zagreb, Croatia

Improvement of Water Quality and Reduction of Leaks
Leader: Darkom Ltd. Public Utility Company, Daruvar, Croatia
Partner: DHI HydroInform, Prague, Czech Republic
Partner: IMGD Ltd., Zagreb, Croatia

KAZAKHSTAN

Reduction of Ammonia Emissions at Dairy Refrigeration Facility
Leader: Atyrau Sutcombinat Open Joint-Stock Company, Atyrau, Kazakhstan
Partner: PSRG Consultants, Houston, TX, USA

Making Production of Solvents Ecologically Cleaner
Leader: Demeu Ltd. Almaty, Kazakhstan
Partner: Sierra Engineering Services, Irvine, CA,USA

Conversion of Solid Waste into an Economically Viable Product
Leader: CJSC Alash, Almaty, Kazakhstan
Partner: K.R. Komarek, Inc., Elk Grove Village, Illinois, USA

MACEDONIA

"BioPrespa" Feasibility Study
Leader: Municipality of Resen, Macedonia
Partner: HydroQual, Inc., Mahwah, NJ, USA
Partner: Fluid Project, Skopje, Macedonia

Solid Waste Management and Modernizing the Landfill in Resen
Leader: JKP " Proleter", Macedonia
Partner: Hydroprojekt CZ, a.s., Czech Republic
Partner: GEING, Krebs und Kiefer International, Macedonia

ROMANIA

Cleaner Production Options for a Ceramic Sanitaryware Factory
Leader: Bianca Romana SRL, Ploiesti, Romania
Partner: Environmental Management, Idaho Falls, ID, USA
Partner: SC "Petrom" INCERP Cercetare, Ploiesti, Romania

Pilot Project for Recycling Municipal Waste
Leader: Bistrita City Mayoralty, Romania
Partner: Resource Recycling Systems. Inc., Ann Arbor, MI, USA

Efficient Energy Consumption, Minimum Climatic Changes
Leader: SC Tufon SA, Craiova, Romania
Partner: Thermal Desorption Technology Group LLC, Budapest, Hungary
Partner: MARCH CONSULTING spol. s.r.o., Prague, Czech Republic

Wastewater Management at ICERP S.A.
Leader: S.C. ICERP S.A. Ploiesti, Romania
Partner: Oshman Group, LLC, Chester, VA, USA

Upgrading the Water Pre-Treatment Plant and Improving the Water Management System
Leader: S.C. Dorobantul S.A., Ploiesti, Romania
Partner: Aponowich, Driscoll & Associates, Inc., Atlanta, GA, USA

Alternatives for Improving the Water Management System of Petromidia
Leader: S.C. Petromidia S.A., Romania
Partner: Harza Engineering Co., Chicago, IL, USA

Reducing Losses in the Thermal Energy Distribution Network
Leader: Iasi District Heating Company, Iasi, Romania
Partner: Cavanaugh & Associates, P. A., Winston Salem, NC, USA

RUSSIA FAR EAST

Feasibility Study on the Production of High-Quality Livestock Feed from Stillage.
Leader: "OAO Likerovodochnyi Zavod" (Open Joint Stock Company), Yuzhno-Sakhalinsk
Partner: Katzen International, Inc., Cincinnati, OH,USA

Vladivostok Drinking Water Management Project
Leader: Vladivostok Municipality, Russia
Partner: Utility Service Associates, Seattle, WA, USA

Community Solid Waste Sorting and Recycling Project
Leader: Community Service Enterprise # 1, Khabarovsk, Russia
Partner: Association of Oregon Recyclers (AOR), Portland, OR, USA

UKRAINE

Solving Environmental Problems of Chemical Enterprises
Leader: Farmak Chemical and Pharmaceutical Plant, Kiev, Ukraine
Partner: TLK Consulting, Kirkland, WA,USA

A Sustainable Waste Management System for Zaporizhzhya.
Leader: Office on Ecology of Zaporizhzhya Municipal Council, Ukraine
Partner: Cantox, Inc., Bridgewater, New Jersey, USA
Partner: Scientific-Technical Industrial Corporation "EcoShield", Ukraine

Climate Change Mitigation Strategy for Donetsk, Ukraine.
Leader: Ecology and Environment Department of Donetsk City Council, Ukraine.
Partner: Twenty First Strategies, LLC, McLean,Virginia,USA

Minimization and Management of Waste Products
Leader: State Communal Enterprise "Blagoustriy", Ukraine
Partner: The Environmental Research and Monitoring Center PP, Poland
Partner: Closed Joint Stock "Dnieprocommunproject", Ukraine

Underground Coal Mines and Utilization of Coal Bed Methane
Leader: Stakhanov Mine, Donetsk Region, Ukraine
Partner: Resource Enterprises Inc., Salt Lake City, UT, USA

Environmentally Friendly Recycling Wastes at "VtorMet"
Leader: Joint Stock Company Konstantinovka plant "VtorMet", Donetsk Region,Ukraine
Partner: Environmental Science Services (ESS), Inc., Wellesley, MA, USA

Fifth Cycle

BOSNIA and HERZEGOVINA

Unaccounted for Water Reduction Plan
Leader: Vodovod I Kanalizacija, Konjic, Bosnia and Herzegovina
Partner: Valu Add Management Services, North Andover, MA, USA
Partner: Hydro-Engineering Institute, Sarajevo, Bosnia and Herzegovina

Substitution of Drinking with Technological Water and Introduction of a Recycling System in the Production Process
Leader: UNIS UNISGAL d.o.o., Konjic, Bosnia and Herzegovina
Partner: Recovery Engineering and Sales, Inc. (REASCO), Arvada, CO, USA
Partner: PLAN d.o.o., Konjic, Bosnia and Herzegovina

BULGARIA

Constructed Wetlands Wastewater Management System
Leader: Municipality of Sewliewo, Bulgaria
Partner: ECOKAN LLC, Cary, North Carolina, USA

Municipal Water System Leak Detection and Abatement
Leader: Plovdiv Municipality, Bulgaria
Partner: EWA Environmental Technologies Inc., Herndon, VA, USA
Partner: Stalker-KM LTD, Sofia, Bulgaria

CROATIA

Cleaner Production and Economical Management of Utilities
Leader: Jarran Galenski Laboratorij d.d.(JGL), Rijeka, Croatia
Partner: PMC Technologies, Exton, PA, USA

Topusko Greenhouse Project, Reuse of Energy and Cleaner Production
Leader: Municipality of Topusko, Topusko,Croatia
Partner: LEMTECH Konsulting, Krakow, Poland

KAZAKHSTAN

Introduction of Cleaner Production at FoodMaster's Dairies
Leader: FoodMaster Company, Almaty, Kazakhstan
Partner: Environmental Control Opportunities, LLC, Waynesboro, VA, USA

Quality Management of the Drinking Water in Leninogorsk
Leader: Leninogorsk Vodokanal, Leninogorsk, Kazakhstan
Partner: Envirosmith Engineering, Inc., Suwanee, GA, USA

Integrated Solid Waste Management System at the Ferroalloys Plant
Leader: JSC Ferrochrome, Aktubiusk Ferroalloys Plant, TNC Kazchrome, Aktobe, Kazakhstan
Partner: EnSafe Inc., Memphis, Tennessee, USA

MACEDONIA

Improvement of Municipal Solid Waste Management in Veles
Leader: Municipality of Veles, Republic of Macedonia
Partner: Burge & Associates, Inc., Tempi, Arizona, USA

ROMANIA

Energy from Sawmill Waste in Bistrita Nasaud County
Leader: Ilva Mica City Hall
Partner: Project Performance Corporation, Richland, WA, USA
Partner: GIE FOLOS SRL, Bucharest, Romania

Implementing Energy Audits in School Buildings
Leader: Giurgiu Town Hall
Partner: Sandhill Associates, Bunswick, ME, USA
Partner: Global Energy Services Ltd., Bucharest, Romania

Integrated Solid Waste Management Program
Leader: Local Council of the City of Slatina
Partner: Aquatest a.s., Prague, Czech Republic
Partner: Quantum Leap S.A., Bucharest, Romania

Energy Audit for Energy Efficiency Improvements at UPSOM
Leader: UPSOM SA, Ocna Mures, Romania
Partner: Sustainable Energy Partnerships, Tarrytown, NY, USA
Partner: Energobit SRL, Cluj Napoca, Romania

The Improvement of the Solid Waste Management System
Leader: The Local Council of Suceava Municipality, Romania
Partner: Gannett Fleming, Inc., Camp Hill, PA, USA
Partner: ASA Holding SA, Bucharest, Romania

Feasibility Study for Modernization of Baneasa Heating Plants
Leader: Bucharest District Heating Company (RADET), Bucharest, Romania
Partner: AEAI, Watertown, MA, USA
Partner: Institute of Power Studies and Design (ISPE), Bucharest, Romania

Cleaner Production in the Ceramic Tiles and Sanitaryware Industry
Leader: SC Cesarom SA, Bucharest, Romania
Partner: Pojasek & Associates, East Arlington, MA, USA

Solid Waste Reduction and Paper Recycling Service Program
Leader: RER Ecologic Service Galati, Romania
Partner: Swanson Environmental Management System, Inc., Highlands Ranch, CO, USA

Reduction of Pollutants from Packaging and Toilet Paper Production
Leader: SC Vrancart SA, Vrancea, Romania
Partner: Sandwell Engineering Inc., Atlanta, GA, USA

Reducing Harmful Emissions by Energy Efficiency Measures
Leader: SC Carbochim SA, Cluj Napoca, Romania
Partner: Good Consulting, Washington Grove, MD, USA
Partner: SC Proenerg SRL, Oradea, Romania

Environmental Improvements by Modernization of Otopeni Thermal Plant
Leader: Ana Aslan National Institute of Gerontology and Geriatrics, Bucharest, Romania
Partner: Artemel International, Inc., Alexandria, VA, USA
Partner: Eninvest SA, Bucharest, Romania

RUSSIA FAR EAST

Water Conservation & Pollution Prevention Project
Leader: Celina Ltd., Yuzhno-Sakhalinsk, Russia
Partner: Loomis Austin, Inc., Austin, TX, USA

Feasibility Study for the Production of Wood Pellets Using Harvest and Saw Mill Waste
Leader: OOO Kristal Ltd., Sakhalin, Russia
Partner: New England Wood Pellet, Inc., Jaffrey, New Hampshire, USA

Alternative for Water Quality Improvement at Pavlovskoe Mine
Leader: JSC Primorskugol Mining Company, Vladivostok, Russia
Partner: EarthFax Engineering, Inc., Midvale, Utah, USA

UKRAINE

Reduction of Greenhouse Effect through Methane Utilization at Lugansk Landfill
Leader: JSC Protos, Lugansk, Ukraine
Partner: SCS Engineering, Inc., Reston, VA, USA
Partner: Scientific Engineering Center "Biomass", Kiev, Ukraine

Integrated System for Managing Solid Waste for Donetsk Iron and Steel Works
Leader: OJSC Donetsk Iron and Steel Works (DMZ), Donetsk, Ukraine
Partner: ICF/EKO Ltd., Moscow, Russia
Partner: Ukrainian Center for Ecological Auditing and Insurance Ltd., Donetsk, Ukraine

Environmentally Safe Water Consumption in Belgorod-Dnestrovksy City
Leader: Belgorod-Dnestrovsky Enterprise for Water Supply and Sewerage, Ukraine
Partner: SRC International CS, sro, Prague, Czech Republic
Partner: Century XXI, Ltd., Kiev, Ukraine

Industrial Wastes Utilization Program for Heat Energy Production
Leader: The Stryi District State Administration, Lviv Region, Stryi, Ukraine
Partner: District Heating Research and Development Center, Warsaw District Heating Enterprise, Warsaw, Poland
Partner: Energy Service Company Univers Ltd., Lviv, Ukraine

Utilization of Biogas Extracted from Sewage
Leader: Ekotekhprom, Ivano-Frankivsk, Ukraine
Partner: Energopol S.A., Lublin, Poland

Program of Saving Fuel and Energy Resources
Leader: Cherkasytransgas, Cherkasy, Ukraine
Partner: Indaco Air Quality Services, Inc., Fayetteville, NC, USA

Utilization of Wood Wastes for Energy Production at Belichi Woodworking Plant
Leader: Belichskiy DOK, Kotsiubinske, Kyiev, Ukraine
Partner: McNeil Technologies, Inc., Springfield, VA, USA

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